Thesis by publication in education: An autoethnographic perspective for educational researchers

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Despite its growing popularity, the thesis by publication is a less conventional format for doctoral dissertations in the field of education. The author successfully undertook a thesis by publication in education from 2012, to submission in 2014. This paper draws on both the literature in the field and the experiences of the author through an autoethnographic approach to explore some of the strengths and limitations of thesis by publication. Key reasons for adopting the thesis by publication mode are outlined, as well as consideration of which types of educational research are most suited to this mode. Institutional support mechanisms and personal attributes that can improve the likelihood of success in this mode are also explored, in addition to the challenges and issues that are particularly significant when producing a thesis by publication. A possible structure and organisation of a thesis by publication in education is also proposed, though this will be determined primarily by institutional policy. This paper will be of interest to prospective doctoral students and higher degree by research supervisors in education seeking to extend their knowledge and experience in this area.

Introduction

In 2012 I made the decision to attempt to achieve thesis by publication (TBP) to report on my PhD research project, the *West Australian Study in Recreational Book Reading* (WASABR). The WASABR investigated adolescents' attitudes toward, and frequency of engagement in recreational book reading, as well as how key social influences, such as teachers and parents, can support the practice effectively. My thesis was one of the first TBPs produced in the School of Education at my institution, Edith Cowan University (ECU). The choice to endeavour to complete the TBP, instead of the traditional thesis, was arrived at as a consequence of numerous factors that made this route appropriate for me, the most significant being the robust support of my institution, which, along with Queensland University of Technology and University of Canberra, was deemed to be "setting a benchmark… to which other universities should aspire" (Starrs, 2008, p. 8) in TBP. This paper reviews the available literature on TBP, in parallel with reflection on my experience since embarking on TBP, exploring key considerations and ultimately seeking to provide a possible scaffold for those intending to undertake or supervise a TBP in education.

A TBP usually involves a collection of research papers, preferably published in well-regarded, peer-reviewed journals, as well as binding materials, such as an introductory chapter and/or discussion section, which bring together the ideas explored in the papers into a cohesive whole. While within Australia, institutional guidelines vary in the types of publications deemed acceptable for inclusion (Jackson, 2013), recent research suggests that examiners are likely to be favourably influenced by publications in highly ranked international, peer-reviewed journals (Sharmini, Spronken-Smith, Golding & Harland,

2015). Generally, it is expected that all of the papers that form the basis of a TPB will, at the very least, be under review at the time of submission; in the context of TBP, publishing is typically viewed as "the submission and acceptance of works in a peer-reviewed outlet" (Jackson, 2013, p. 9).

The TBP model discussed herein does not include the "staff doctorate" or "PhD by prior publication" (Davies & Rolfe, 2009; Jackson, 2013), which is sometimes also referred to as a TBP. The PhD by prior publication differs mainly from the TBP in that it is a retrospective award consisting predominantly of peer-reviewed articles that have already been published prior to candidature (Davies & Rolfe, 2009), whereas in the TBP, all publications are written during candidature, and are directly relevant to the doctoral research questions.

I draw deeply upon my own experiences completing a TBP, as well as the literature in the area, in order to generate a discussion paper around the experience. As such, this paper adopts an autoethnographic perspective, using personal experience as a frame for description and analysis of a particular phenomena (Ellis, Adams & Bochner, 2010). To further refine the method, this paper could be characterised as an analytic autoethnographic contribution, in that I meet the requirements as specified by Anderson (2006), of being a member of the relevant research group or setting; visible as a member through contribution, such as published texts; and committed to furthering theoretical understandings of social phenomena. I am an active member of the research community who has produced the artefact in question, the TBP, and I now seek to contribute to collective understandings of the strengths and limitations of this thesis mode.

Doctoral candidates are expected to produce research articles that meet the standard of international peer-reviewed journals, with increasing levels of publication output expected during candidature (Catterall, 2011; Lee & Kamler, 2008). Choosing to complete a TBP is one means of meeting publication expectations, while still progressing directly toward a completed dissertation. While the traditional monograph still holds sway, a growing trend towards the TBP has been observed in Australian higher education since the late 1990s (Cuthbert & Spark, 2008), with the majority of Australian tertiary institutions offering this pathway (Jackson, 2013). Nonetheless, acceptance of the TBP is not universal, with both supervisors and examiners often holding reservations about the legitimacy of this mode (Dowling, 2012).

Responsiveness to contemporary academic culture

In contemporary academic culture, publication is increasingly an imperative as a measure of both individual and institutional achievement (Sinclair, Barnacle & Cuthbert, 2014). A decision to undertake TBP, instead of the traditional thesis route, may be seen as responsive to an academic environment in which even entry level academic positions require a publishing history in additional to a doctoral-level qualification (Brien, 2008). Doctoral candidates are encouraged to publish both early and often during their candidature, and doctoral students ultimately make a significant contribution to the research system through their publications, though the degree of contribution varies

notably between disciplines (Lariviere, 2012). Completing a TBP can do much to contribute to the profile of the doctoral candidate beyond the period of candidature, enabling them to emerge as an early-career researcher with a track record in publication, responsive to an academic climate in which publication is increasingly positioned as a key performance measure (Cleary et al., 2012; Sharmini et al., 2015). There has also been an increased focus on developing the research training agenda within institutions, to support doctoral candidate's to meet these growing expectations (Yates, 2010).

The period of doctoral candidature presents the opportunity to focus on research output, which may not be subsequently available. Recent doctoral graduates who are able to secure an academic position are often given a heavy teaching load, finding their research efforts somewhat frustrated as a result (Hemmings, 2012). In addition, while doctoral candidates who defer publication until after thesis completion may not only find that their data are dated, they may also discover that "the last thing they feel like doing after the examination process is complete is to return to their thesis and start to 'chop it up' and 'mould it'" for the purposes of publication (Wellington, 2010, p. 140). Engaging in TBP not only means that the candidate deals with the data while it is fresh and motivation is high, it also means that they are not forced to retrospectively shape their findings to meet the needs of publication; that process has been ongoing and iterative.

Embarking on TBP also allows the doctoral candidate to evaluate their personal suitability for the academic research profession. Stoilescu & McDougall (2010) contended that while publishing during doctoral candidacy is highly beneficial for securing a post-doctoral academic position, graduates should write for peer-reviewed journals "to see if they enjoy publishing and if academia is a suitable lifestyle for them", suggesting that doctoral students "should write just because of who they are and not because of external, social or professional pressures" (p. 79). This idea resonated with me, as not only did I wish to be responsive to an academic culture that places an emphasis on the importance of publication, I also wanted to see if this was a role in which I could experience both success and enjoyment.

Finding authorial voice(s)

Undertaking TBP also enables students to begin to develop their distinctive "voice" as authors, as well as find and define a place for themselves within their chosen field (Brook et al., 2010). While the importance of finding a confident authorial voice has been explored in previous research (Guerin & Picard, 2012), as a researcher in education I needed to develop multiple appropriate authorial voices to meet the requirements of the journals to which I was submitting my work. I had a limited previous publishing history as a co-author of two articles in health promotion prior to undertaking my PhD in Education, and I was surprised by the comparative diversity of voice demanded by academic journals within the field of education. This expectation of use of appropriate voice is often made explicit in the author guidelines. For example, the Journal of Adolescent & Adult Literacy (JAAL) advises prospective authors to "familiarize yourself with articles published in JAAL to gain insight on the voice, tone, and format appropriate for the journal's audience" prior to writing a piece for submission (ILA, n.d.).

Research translation

It may be anticipated that educational researchers embark on their research projects with a desire to ultimately influence pedagogy and/or educational policy, with timely translation or dissemination desirable while data are still viewed as current. Laing & Brabazon contended, "there are few doctorates that contribute in a measurable and quantifiable way to social, economic or political change" (2007, p. 265). This is problematic in light of the significant level of "personal and social investment" for doctoral candidates, which "should translate into greater knowledge, understanding and social improvement," not merely "gather dust on a shelf" (Dinham & Scott, 2010, p. 49). Wellington (2010) goes so far as to suggest that it may even be perceived as "unethical to do research, especially if it involves the time and effort of participants, and not disseminate their 'voices' and your findings to a wider audience" (p. 139). Producing papers for publication also enhances the speed of dissemination of findings in comparison with the traditional thesis, as the target audience does not need to wait for the thesis to be finalised to have access to crucial findings, though it should be noted that publication in peer reviewed journals does not guarantee the dissemination of ideas beyond academia. As such, a broader translation strategy is required, one that considers how to best reach target stakeholders.

The importance of research translation in academic research has considerable currency in the context of the doctoral research project, with Yates (2010) suggesting that "signs of external 'impact' of the work beyond the thesis" are increasingly a key component of measuring the quality of doctoral output (p. 304). I found undertaking the process highly conducive to communicating my findings beyond academia, to reach teachers, adolescents and parents. The coverage of my work in the newspaper *The West Australian* (Hiatt, 2014; King, 2014) led to it being picked up by ABC online (Wynne, 2014), social networking pages and online blogs and websites (e.g. Byrne, 2015; Costa, 2014). This led to a trickle down effect, with references to my work appearing in school newsletters both in Australia and in the UK, which was one of my ultimate translation goals. I was also interviewed for an audio podcast for JAAL and an audio/visual podcast for the Australian Journal of Education. The media opportunities have not only led to a dissemination of my findings; they have also increased opportunities for networking and collaboration in my field.

Critical feedback

It is a requirement that doctoral research constitute "an original and significant contribution to knowledge in the discipline in which it was conducted" (Dinham & Scott, 2010, p. 45), however both the supervisory team and the doctoral candidate may become blinded by subjectivity, and thus may be unable to objectively discern if the project has ultimately fulfilled this criteria. After an extended time working on a project, it is easy for the researcher and supervisors to make unconscious assumptions about what is being communicated, making it difficult to be optimally critical. As the external journal reviewers were ostensibly experts in the field with no familiarity of my work, or myself, their perspective was unencumbered with the preconceptions that constrain subjectivity. Their feedback provided perspectives from different cultures and continents and well as broad areas of expertise within my field. In the cases where articles were accepted with

major changes, or I was asked to revise and resubmit, the challenges posed by the external journal reviewers and their in-depth critique almost constituted an extension of my supervisory panel. The contributions of my external journal reviewers were invaluable, and they made my thesis a product of much broader collaboration beyond the typical supervisory structure.

Becoming a researcher

Early career researchers who have had the experience of publishing in peer-reviewed journals were more likely to view their "research skills in a positive light", developing a "researcher identity" (Hemmings, 2012, p. 178), and achieving this goal during doctoral candidature enabled me to graduate with this sense of researcher identity established. As an early adopter of the TBP approach within my school, I was viewed as both as a pioneer and risk taker, which was both exciting and daunting. Before my work was accepted, it felt like a gamble to invest so much time on this approach, despite the potential benefits. Completing a TBP enables learners to swiftly enter their field, opening up possibilities for international discussion and collaboration. Dinham & Scott (2010) contended that "without publication and/or presentations at conferences students or recent graduates cannot hope to achieve the professional visibility necessary for the development of their academic careers" (p. 45), and I observed that publication during candidacy significantly increased international interest in my work.

Unpopular ideas

Elements of my research conflict with, and indeed in some cases contradict, current popular stances on text values and new literacy studies, such as Prensky's homogeneous conceptualisation of Digital Natives (2001). This placed me at risk of being deemed an "opponent" of "new information and communication technologies" and thus potentially labeled a "doomster" (Bigum & Kenway, 2001). Though book reading is still important, and more consistently associated with literacy benefits than the reading of other text types (e.g. OECD, 2011), current academic debate in my field is concerned principally with "new developments," such as "the impact of new technologies and the relationship with new literacies; greater acknowledgement of popular culture in the classroom; innovative thinking about multimodality and visual literacy;" with "more recognition of the importance of learning in different media such as film or graphic novels", and comparatively few articles concerned with the reading of books (Cliff Hodges 2010, p. 60). From my first publication I was frequently challenged by external journal reviewers to argue for the legitimacy of focusing on a text type that some within my profession viewed as outdated. When approaching educational journals, the purpose of seeking to support the fostering of a love of book reading was deemed a comparatively "lightweight" agenda, whereas literacy and English journals tended to value the purpose of the project.

Starrs contended that one of the risks of TBP is that the process of peer review "can result in the rejection of new ideas that conflict with the established opinions of the referees" (2008). This risk is always present when submitting a thesis for examination, but it is compounded by the extent of peer review a TBP is exposed to. While arguably all

theses should contain potentially insubordinate ideas, the reception of these ideas is not dependent only on the manner in which they are communicated; the culture that receives them can also significantly determine whether or not they will ever be heard. I also encountered difficulty when presenting quantitative findings in this field; overall, contributions were often rejected by journals that predominantly published qualitative research, and then subsequently published unchanged elsewhere where quantitative research was viewed more favourably.

In addition, it cannot be guaranteed that doctoral candidates will easily be able to locate experts in their field who are open to the prospect of examining a TBP. Moodie and Hapgood (2012) described being met with two "independent passionate responses" from otherwise "well respected, mild mannered colleagues" in the field of engineering as they viewed it to be an inferior product (p. 886).

Which research is most suited to this mode?

Dowling et al. (2012) contended that TBP is "particularly suited to doctoral research that addresses a number of related but potentially stand-alone empirical or conceptual issues" (p. 295). This kind of research lends itself more readily into separation into discrete papers, which can still be brought together as valuable contributions for the exploration of a single research investigation. As the papers need to have direct relevance to the argument of the thesis, functioning both individually and as part of the thesis whole (Jackson, 2013), the appropriateness of TBP should be determined at the early planning stages, with a broad research inquiry with multiple facets providing insight evident in the early research proposal and research questions. In my case, the breadth of material I wished to explore leant itself easily to key categories that could be examined in discreet publications. In addition, the research needs to be "of sufficient substance and scale that it can be reported in highly ranked journals" (Moody & Hapgood, 2012, p. 888). My publications were responsive to my research questions, which were as follows.

In the context of *Western Australian Recreational Book Reading*:

1. What is the frequency and volume of current engagement in recreational book reading?
   - 1.1 How frequently do adolescents read and how many books?
   - 1.2 Is regularity and volume of recreational book reading significantly different for boys and girls?
2. What are current attitudes of adolescents toward recreational book reading?
   - 2.1 Do adolescents deem recreational book reading enjoyable?
   - 2.2 Is attitude toward recreational book reading significantly different for boys and girls?
   - 2.3 Do adolescents deem recreational book reading socially acceptable?
   - 2.4 Have technological developments and media influences impacted on attitudes towards and preferred modes of engagement in recreational book reading?
3. What is the influence of parents, English teachers, friends and peers on adolescents' attitudes toward recreational book reading?

4. What changes in school policy and practice are implied by the findings, if recreational book reading is to flourish among WA adolescents?

My research questions outline a broad field of inquiry, which was appropriate in my circumstances, as no study of equal breadth had recently been undertaken in my specific research area and context. I subsequent relate these research questions to my papers in Table 1, highlighting the connection between the inquiry and the paper outputs.

What skills, supports and knowledge promote success?

Understanding expectations

Institutions should provide support for their students in acquiring the range of abilities that lead to successful publication, and also equip students with an understanding of what is expected of them. Jalongo, Boyer and Ebbeck (2014) recently found that doctoral candidates might not understand the mechanics of writing for publication, exploring misconceptions such as a belief that "the reviewers' role was to coach the writer in how to succeed at publication" (p. 245). Moody and Hapgood (2012) also found that there may be prevailing misconceptions around how to achieve TBP, describing a student who erroneously believed that "if the minimum number of papers was N, then if they wrote N papers they would have a PhD thesis and be awarded a PhD", not grasping that the thesis needed to be developed further into a coherent body of work, perhaps due to the fact that "faculty guidelines did not emphasise enough the importance of a final paper or discussion chapter to bring the entire thesis together" (p. 886). As I embarked on my PhD with some background experience in publication, I already had some experience identifying the key ideas that could be deemed worthy of publication, within a large body of work. I was not as dependent on external supports for intellectual socialising to produce papers worthy of peer reviewed publication (Hakkaraienen et al., 2014a), though I still required substantial education and support around research epistemology. My familiarity with working in self-regulated time constraints, and how to respond to peer review critique, could also be drawn upon in this context. I also explored the available research around TBP, with particular emphasis on publishing pedagogies, such as how to avoid obvious 'tells' in my work that reveal my status as a novice (Pare, 2010), and practical suggestions about how to make requested revisions to articles (Kamler, 2010). In my case, prior experience, institutional support and self-directed learning combined to enable me to have sufficient understanding of expectations to proceed with some degree of fledgling confidence.

Confidence in writing

Confidence in writing ability will need to be fostered early if a candidate wishing to complete TBP does not already possess it. This may be problematic, as research suggests that writing may be a frustrating challenge for many doctoral students, with journal article writing ranked second in difficulty behind thesis writing, with issues in writing arising from a range of potential areas, such as "constraints in candidacy time, students' varied language proficiency and the differing expertise and/or confidence of supervisors in

teaching writing" (Catterall, 2011, p. 6), which were not always sufficiently addressed in both pre-doctoral and doctoral learning (Catterall, 2011; Jalongo, Boyer & Ebbeck, 2014).

However, these rankings can also give insight into how journal article writing might be preferred to thesis writing, due to its comparatively compact nature, and the high level of exposure doctoral students will have with this writing form through their extensive processes of literature review. While addressing retrospective TBP rather than the defined model discussed herein, Grant's (2011) argument that TBP is a viable option for those "who cannot bear the thought of embarking on a great tome of work" (p. 261) is still relevant to this model, where papers are completed during doctoral candidacy. Thus breaking the thesis up into a series of journal articles, which tell the story of the research, may be more palatable, though writing for journals would certainly not be deemed an "easy" option due to the complexity of its demands, and the need to meet the requirements of diverse external journal reviewers. In addition, Frances, Mills, Chapman & Birks (2009) argue that choosing to complete a TBP can "encourage completion" as "students who publish throughout their candidature receive ongoing peer review, enhance their writing skills, and are scholastically affirmed as manuscripts are accepted for publication" (p. 99).

Institutional and supervisory support

While supervisory support has been found to be strongly associated with successful publication, institutional support is even more so (Dinham & Scott, 2010), and responsiveness to institutional encouragement motivated my decision to attempt TBP. As ECU was highly supportive of students choosing to embark on TBP, I was able to attend a number of workshops on TBP and academic writing on campus, as well as access all of the additional support I needed to become confident in the numerous skill deficiencies that I identified as barriers to my project achievement. I attended many training sessions at ECU's Graduate Research School and used their numerous support mechanisms for dyadic advice when I needed to use techniques of analysis that were relatively new to me. I was fortunate to be enrolled in an institution that understood the importance of explicit instruction in this area, rather than relying on "tacit knowledge as the major mechanism for acquiring the competence and the dispositions associated with successful publication in scholarly outlets" (Jalongo, Boyer & Ebbeck, 2014, p. 249). I broadened my network of potential article 'readers' to maximise the level of pre-submission feedback I could receive. This institutional and supervisory assistance was invaluable, with research suggesting that direct, ongoing support significantly impacts on doctoral publication output (Lee & Kamler, 2008), and that encouragement by supervisors is "strongly and significantly associated with publication success" (Bullen & Reeve, 2011, p. 806). Despite the prevailing emphasis on the importance of supervisory support in the literature around TBP (e.g. Sinclair, Barnacle & Cuthbert, 2014), it is still possible for motivated candidates to achieve publication with minimal supervisory support as long as institutional support is forthcoming (Maher et al., 2013).

As a discipline within the social sciences and humanities, it can be contended that in education there is a "relatively individualistic writing and publication culture" which "may

not be as conducive to discussions about the processes of writing for publication" when compared with "disciplines in which joint publications, including co-authoring arrangements between supervisor and candidate, occur more frequently" (Cuthbert & Spark, 2008, p. 79). As such, the explicit availability of institutional and supervisory support in education is essential, as it may not be a natural part of the education research culture.

My principal supervisor, who carried almost my entire supervisory load, provided ongoing support when needed, trusting me to work autonomously for sustained periods of time. This confidence in my autonomy helped to build my sense of self as an autonomous researcher. While it has been suggested that the TBP process may lead to a significant additional workload for supervisors (Robins & Kanowski, 2008), this was not the case for the WASABR project. I worked closely with my principal supervisor during the project-planning phase, and after I received confirmation of candidature, I adopted a highly autonomous role, to the extent that I only gave my supervisor the first three of my ten papers to review. Once my papers began to be accepted, I stopped expecting my principal supervisor, who had already been generous with his time, to look at my papers prior to submission, relying instead on reciprocal arrangements with peers to perform an internal reviewing function. It was also beneficial to find other partners to internally review my work, as my supervisor was already deeply knowledgeable about my study. I needed the discerning eye of a third party "unfamiliar with the area of study" where possible, to ensure that my work did not rely on assumptions, and that the manuscript was "clear, direct and understandable" (Saracho, 2013, p. 53). Hakkaraienen et al. (2014a) found that as doctoral students progressed beyond early achievement of publication, they required less supervisory support, though this remained important, with a supervisor found to request "doctoral students to submit one article without the supervisor's direct assistance so as to facilitate their academic independence" (p. 22). Writing alone can be considered "a major path to build academic personality" (Stoilescu & McDougall, 2010, p. 86), and I feel this idea warrants further investigation in the context of doctoral students attempting to function with higher academic autonomy. Though I recognise that the degree of relinquishment of didactic support and subsequent and increased student autonomy will be highly variable, depending on the individuals concerned and the field, amongst other factors, I cannot sufficiently stress how empowering it was to find myself in a position of high autonomy in my research journey.

A selective approach to skills acquisition during doctoral candidacy

Undertaking a TBP enabled me to learn publication skills, a key component of the "tools of the academic trade" (Cuthbert & Sparks, 2008, p. 79), while still viewed as a relative apprentice. I adopted the view of Francis, Mills, Chapman and Birks (2009), in that I viewed my PhD as a process of research training that would culminate in a doctoral qualification. As candidature was a relatively limited period of time, and time and resources were finite, I was required to be strategic about my skill acquisition, and consider long-term benefits of skill acquisition for my future career. A thesis writing skill it is not likely to be repeatedly utilised. I deemed journal article writing, and negotiating the process of submission and response to peer-review, a more valuable skill to focus on

acquiring. Francis, Mills, Chapman and Birks (2009) contended that while the traditional approach to doctoral dissertation construction "develops student's knowledge and skills in conducting an independent piece of research", "the production of a traditional thesis does not focus strongly enough on developing the important skills of writing for publication and knowing how to effectively and strategically disseminate research findings" (p. 97). Learning to write for publication is a distinct skill that is new to many doctoral candidates, but invaluable for an academic career. Lee and Kamler (2008) contended that a successful writing pedagogy for publication involves "imagining the purpose of doctoral research as 'systematic inquiry made public'; addressing readers outside of the supervisors/examiners; and acquiring sufficient distance from the text to marshal resources for strategic decision-making" (p. 512), and I was aware that I needed to further develop this skill set to improve my academic writing.

Resilience

Ability to cope with criticism is clearly a transferrable skill extending beyond academia, and this skill is likely to be fostered while undertaking a TBP, as the doctoral candidate is exposed to in-depth critical feedback from many more expert sources than by the traditional route, where usually two or three examiners provide feedback at the end of the process. Doctoral students who display a negative attitude toward critical feedback are likely to develop reticence to seeking critical feedback in the future (Can, 2009), potentially restricting their capacity for growth as reflective researchers. Thus while a first response may intuitively involve discouragement, overcoming these feelings and embracing a resilient attitude is essential to be able to take a clinical, detached stance on a person's own work, enabling them to craft and polish work to a higher level. Embarking on TBP also requires a great deal of patience. Preparing articles that adhere to the unique author guidelines and preferred style for each publication, particularly in regards to formatting and referencing, can be arduous, as can be developing the paper through the required revisions. As Robins and Kanowski (2008) contended, "the process of writing the article through to receiving it in-print can prove somewhat frustrating and wearing when superimposed on a student's day-to-day research workload" (p.14).

In an article exploring published articles as dissertation, this ongoing critical feedback is likened to being hit regularly by projectile walnuts, with feedback for a traditional thesis post-submission comparatively likened to being hit in one session by projectile coconuts (Lee, 2010). My first paper was resoundingly rejected, and I was forced to become far more critical of my own work. Overall, I found Lee's analogy to be apt, and that while occasionally painful, regular critical feedback was preferable to the requirement of more substantial changes after submission. I hoped to mitigate risk by exposing my work to broad criticism from beyond the relative security of my dyadic interaction with my principal supervisor.

It is also noteworthy that embarking on the TBP journey can support resilience and foster commitment for continuance in the doctoral student, as publications can represent achievable milestones. Grant (2011) noted that "the student is tangibly rewarded, at intermittent stages during the doctoral journey, for work published", and that "even if the

student elects not to complete the degree, aspects of her work which she published are recognized and rewarded accordingly" (p. 261). Publishing during candidature has also been associated with reduced attrition rates (Jackson, 2013).

An example of a thesis by publication structure

Structural differences, coherence and authorship

The TBP does not look the same as a traditional thesis; for example, it does not require a separate methodology or literature review, if these elements are sufficiently addressed in the research papers. As a consequence, the TBP does not structurally resemble the traditional thesis, though all of the same required information is contained within it. Sharmini et al. (2015) recently identified two key issues in examining TBPs: "unclear contribution by the PhD candidate" and a "lack of coherence" (p. 95), concerns shared by Moodie and Hapgood (2012). Indeed, lack of coherence is also a key concern in examining a traditional thesis (Mullins & Killey, 2002), though this is more likely to be an issue in the TBP format. While Moodie and Hapgood (2012) encountered a small number of examiners of such theses who felt constrained, with a sense of "'rubber stamping' the thesis, since the papers are all already published and therefore there is little or no opportunity for comment and review" (p. 886), other research indicates that examiners are "favourably influenced" by publication in a quality journal (Mullins & Killey, 2002, p. 381).

While my work ostensibly did not have the issue of unclear contribution, in that all of my papers were sole-authored, my work did have a number of unacknowledged minor contributors, the most significant of which were the blind peer-reviewers who sometimes required very substantial reworking of my argument. While I tried to avoid doubling up in my reporting to avoid disturbance to the logical flow of my work (Sharmini et al., 2015, p. 96), external journal reviewers demanded a level of overlap that led to me undertaking a higher level of self-citation than I desired, resulting in unavoidable repetition. My discussion section thus played a crucial role in re-establishing the narrative of my thesis. Being a sole author was a significant responsibility as it meant that I had full autonomy and accountability for producing papers worthy of publication, however it also enabled me to avoid engaging in the somewhat contested space of author order negotiation (Cleary et al., 2012; Welfare & Sackett, 2011), can be problematic in the context of TBP, as ideally the doctoral candidate is expected to have provided the bulk of the effort, and therefore be positioned as the first author.

As previously highlighted, education journals have their own unique voices, and researchers preparing to submit to journals are in many cases explicitly urged to familiarise themselves with the voice appropriate to the publication of their choice. The result of catering to the requisite tone of these voices is that the journal articles that feature within my thesis had unique, independent voices, some of which preference a more dry, scientific approach, others of which were optimally accessible and humanised for an intelligent audience at the intersection of academia and industry, inclusive of English educators. As the thesis is generally expected to read as a cohesive unit, I highlighted this issue in the

introductory material, so that the reader could make concessions based on the author's inconsistent adoption of voice that was potentially disruptive to the overall coherence of the thesis. It should also be noted that the expectation that the TBP conform to limiting conceptions of what is deemed to constitute a "cohesive unit" can also inadvertently restrict the potential of this mode to allow alternative avenues for demonstrating mastery of an area of knowledge, though this issue extends beyond the scope of this paper.

The structure of my thesis

While the structure of a TBP in education will be primarily directed by the guidelines of the doctoral candidate's institution(s), I outline a possible structure and organisation of a TBP as follows, based on my own thesis, which could not be published due to the copyright issues of the various bodies involved in publishing the journal articles. This is offered as a guide only; when I commenced my TBP, I had few examples to draw upon from my field for insight into how to use structure effectively to bring together the papers into a cohesive argument.

Reflecting the traditional thesis model to some extent, the thesis begins with an abstract, followed by acknowledgements, a table of contents, and a definition of key terms, which was added as a separate section at the request of the examiners. Due to the newness of TBP in my area, I subsequently included a brief rationale explaining why I chose to adopt the TBP format for presentation of my thesis, and how the thesis would tell its story within the constraints of its structure. I then included a substantial introduction which detailed the background to the project, theoretical and conceptual frameworks, an explanation of the method employed, research aims, research questions, as well as publications (as per Table 1) and the rationale employed in their organisation.

The papers detailed in Table 1 were then organised into four thematic sections, though a number of the papers could have been cross-classified. Each section was prefaced by a preamble that justified the inclusion of the papers within that thematic heading.

Bringing together the argument

The discussion section of the thesis was the most challenging, due to the limited amount of research in this area around what constitutes and effective discussion in the context of the TBP (Robins & Kanowski, 2008). Presthus and Bygstad (2014) recently explored this issue, suggesting a four-step framework enabling the thesis summary to achieve integration of the individual papers. In my case, I moved beyond a summation of the key findings in the thesis to exploration of their implications, exploring how the body of work as a whole could inform understanding of current attitudes of adolescents toward recreational book reading, as well as the impact of parents, English teachers, friends and peers on adolescents' attitudes toward recreational book reading. I also evaluated the efficacy of my research design and method, identifying both strengths and weaknesses. I then identified additional limitation and areas for future research, before concluding the thesis with final summative comments, references and the required appendices.

Table 1: Papers forming the body of the thesis by publication
Citations and updates may be obtained from http://profiles.murdoch.edu.au/myprofile/margaret-merga/

Title of publication	Research questions addressed	Publication status at time of submission
Are Western Australian adolescents keen book readers?	1.1, 1.2, 2.1, 2.2	Accepted in the *Australian Journal of Language and Literacy*
Peer group and friend influences on the social acceptability of adolescent book reading.	2.3, 3	Published in the *Journal of Adolescent and Adult Literacy*
Are teenagers really keen digital readers?	2.4	Accepted in *English in Australia*
Are avid adolescent readers social networking about books?	2.4	Accepted in *New Review of Children's Literature and Librarianship*
The influence of movie adaptations on adolescents' attitudes toward source books.	2.4	Under review
Exploring the role of parents in supporting recreational book reading beyond primary school.	3	Published in *English in Education*
What would make them read more? Insights from Western Australian adolescent readers.	3	Under review
Should Silent Reading feature in a secondary school English programme? West Australian students' perspectives on Silent Reading.	3, 4	Published in *English in Education*
"What would make you read more?" Opportunities for supporting an increase in teenagers' book reading.	4	Accepted in *Asia Pacific Journal of Education*
Western Australian adolescents' reasons for infrequent engagement in recreational book reading.	4	Accepted in *Literacy Learning: The Middle Years*

Conclusion

Though TBP is not a new thesis form, choosing TBP to communicate the findings of a doctoral research project in education may still be regarded in many institutions as a pioneering option. In order to undertake this form as a doctoral candidate or supervisor, there is much to be considered, and this paper has endeavoured to highlight the advantages of joining the conversation early through TBP. While the subsequent potential benefits for academic career prospects are often situated as the primary reason for considering this mode, I argue that the advantages for research translation beyond academia are of even greater value. Embarking in TBP not only potentially situates doctoral candidates as a professional researcher and expert in their field if they are successful, it also enables them to determine if a research career is appropriate for them.

The potential for TBP to test the palatability of potentially controversial ideas within the field is also underexplored, and this opportunity was of great value for me, as the resistance of some external journal reviewers to the validity of discussing what was perceived to be an outdated text type forced me to galvanise and develop robust

supporting arguments to counter this contention. Thus, even critical feedback that I viewed as unjust offered benefit, acting as a catalyst to greater maturity in my expression.

While my principal supervisor was very supportive when I sought assistance, I preferred to be as autonomous as possible, and my institution, which provided a wealth of training and assistance, facilitated this. Without this support I would not have had the confidence to proceed with high autonomy as a self-directed learner of research. Greater emphasis on fostering the autonomy of doctoral candidates, rather than placing of high dependence on supervisor support, maybe appropriate in many cases.

I have one reservation about the degree of autonomy I achieved. My collaborative research skills were not well developed through this experience. Research in the social sciences often occurs as a collaborative pursuit, part of a process of "collective knowledge creation" (Hakkaraienen, 2014b). Brook et al (2010) strongly challenged the convention that the PhD journey be solely concerned with an individualistic pursuit of intellectual autonomy, contending that scholarship should also be about fostering with relationships, enabling collaborative pathmaking which is a relational, rather than individual process, through which creative possibilities emerge" (p. 657). While fortunately I have had previous exposure to collaborative research prior to my doctoral journey, this was outside the field of education, and thus to some extent, my doctoral candidature represents a lost opportunity to engage in a collaborative learning process with experienced peers.

While there is great value in examining the strengths and weaknesses of particular models for embarking upon the TBP, the uniqueness of my own TBP journey leads me to conclude that as our understandings of possible pathways to TBP progress, it is likely to be ultimately concluded that the journey needs to be tailored to unique individual circumstances, and negotiated between the individual, the supervisory team and the institution(s). My TBP structure is offered as a potential pathway, which can be used in conjunction with other scaffolding materials to support future attempts at TBP.

References

Anderson, L. (2006). Analytic autoethnography. *Journal of Contemporary Ethnography*, 35(4), 373-395. http://dx.doi.org/10.1177/0891241605280449

Bigum, C. & Kenway, J. (2001). New information technologies and the ambiguous future of schooling - some possible scenarios. In A. Hargreaves, A. Lieberman, M. Fullan & D. Hopkins (Eds), *International handbook of educational change,* pp.374-395. Toronto, Canada: OISE.

Brien, D. L. (2008). Publish or perish?: Investigating the doctorate by publication in writing. In *The creativity and uncertainty papers: The refereed proceedings of the 13th conference of the Australian Association of Writing Programs*, *Sydney*. http://www.aawp.dreamhosters.com/wp-content/uploads/2015/03/Brien1.pdf

Brook, J., Catlin, S., DeLuca, C. Does, C., Huntly, A. & Searle, M. (2010). Conceptions of doctoral education: The PhD as pathmaking. *Reflective Practice*, 11(5), 657-668. http://dx.doi.org/10.1080/14623943.2010.516981

Bullen, C. R. & Reeve, J. (2011). Turning postgraduate students' research into publications: A survey of New Zealand masters in public health students. *Asia-Pacific Journal of Public Health*, 23(5), 801-809. http://dx.doi.org/10.1177/1010539511417998

Byrne, M. (2015). Reading for the fun of it. Blog posting, 7 May, The Royal Children's Hospital Melbourne. http://blogs.rch.org.au/education/2015/05/07/young-people-love-reading-fun

Can, G. (2009). *A model for doctoral students' perception and attitudes toward written feedback for academic writing*. All graduate theses and dissertations, Paper 227, Utah State University. http://digitalcommons.usu.edu/etd/227

Catterall, J., Ross, P., Aitchison, C. & Bergin, S. (2011). Pedagogical approaches that facilitate writing in postgraduate research candidature in science and technology. *Journal of University Teaching and Learning Practice*, 8(2), 7. http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1212&context=jutlp

Cliff Hodges, G. (2010). Reasons for reading: Why literature matters. *Literacy, 44*(2), 60-68. http://dx.doi.org/10.1111/j.1741-4369.2010.00552.x

Costa, S. (2014). Evolving to eReading: Is it time? Blog posting, *Sam Costa: Youth, popular culture and texts*, 20 October. https://samcrn600blog.wordpress.com/tag/prensky

Cuthbert, D. & Spark, C. (2008). Getting a GRiP: Examining the outcomes of a pilot program to support graduate research students in writing for publication. *Studies in Higher Education*, 33(1), 77-88. http://dx.doi.org/10.1080/03075070701794841

Davies, R. E. & Rolfe, G. (2009). PhD by publication: A prospective as well as retrospective award? Some subversive thoughts. *Nurse Education Today*, 29(6), 590-594. http://dx.doi.org/10.1016/j.nedt.2009.01.006

Dinham, S. & Scott, C. (2001). The experience of disseminating the results of doctoral research. *Journal of Further and Higher Education*, 25(1), 45-55. http://dx.doi.org/10.1080/03098770020030498

Dowling, R. (2008). Geographies of identity: Labouring in the 'neoliberal' university. *Progress in Human Geography,* 32(6), 812-820. http://dx.doi.org/10.1177/0309132507088032

Ellis, C., Adams, T. E. & Bochner, A. P. (2010). Autoethnography: An overview. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research,* 12(1), Art. 10, http://nbn-resolving.de/urn:nbn:de:0114-fqs1101108

Francis, K., Mills, J., Chapman, Y. & Birks, M. (2009). Doctoral dissertations by publication: Building scholarly capacity whilst advancing new knowledge in the discipline of nursing. *International Journal of Doctoral Studies*, 4, 97-106. http://ijds.org/Volume4/IJDSv4p097-106Francis269.pdf

Grant, C. (2011). Diversifying and transforming the doctoral studies terrain: A student's experience of a thesis by publication. *Alternation,* 18(2), 245-267. http://www.researchgate.net/publication/265317931_Diversifying_and_Transforming_the_Doctoral_Studies_Terrain_A_Student's_Experience_of_a_Thesis_by_Publication

Guerin, C. & Picard, M. (2012). Try it on: Voice, concordancing and text-matching in doctoral writing. *International Journal for Educational Integrity*, 8(2), 34-45. http://www.ojs.unisa.edu.au/index.php/IJEI/article/view/808

Hakkarainen, K., Hytönen, K., Lonka, K. & Makkonen, J. (2014a). How does collaborative authoring in doctoral programs socially shape practices of academic excellence? *Talent Development & Excellence*, 6(1), 11-29. http://www.iratde.org/images/TDE/2014-1/02tde-2014-1-hakkarainen.pdf

Hakkarainen, K., Hytönen, K., Makkonen, J. & Lehtinen, E. (2014b). Extending collective practices of doctoral education from natural to educational sciences. *Studies in Higher Education*, (ahead-of-print). http://dx.doi.org/10.1080/03075079.2014.914910

Hemmings, B. (2012). Sources of research confidence for early career academics: A qualitative study. *Higher Education Research & Development*, 31(2), 171-184. http://dx.doi.org/10.1080/07294360.2011.559198

Hiatt, B. (2014). Only one in five teens reads books. *The West Australian*, 9 October. https://au.news.yahoo.com/thewest/a/25216032/only-one-in-five-teens-reads-books/

ILA (International Literacy Association) (n.d.). Author guidelines. *Journal of Adolescent & Adult Literacy*. http://onlinelibrary.wiley.com/journal/10.1002/%28ISSN%291936-2706/homepage/ForAuthors.html

Jackson, D. (2013). Completing a PhD by publication: A review of Australian policy and implications for practice. *Higher Education Research & Development*, 32(3), 355-368. http://dx.doi.org/10.1080/07294360.2012.692666

Journal of Adolescent and Adult Literacy (Producer) (2014). Peer group and friend influences on the social acceptability of adolescent book reading (audio podcast, March). http://www.reading.org/downloads/podcasts/jaal-57-6-margaret-merga.mp3

Kamler, B. (2010). Revise and resubmit: The role of publication brokers. In C. Aitchison, B. Kamler & A. Lee (Eds.), *Publishing pedagogies for the doctorate and beyond*, pp.64-82. Oxon, UK: Routledge.

King, R. (2014). Books still cool for teens. *The West Australian*, 13 March. https://au.news.yahoo.com/thewest/a/21951724/books-still-cool-for-teens/

Laing, S. & Brabazon, T. (2007). Creative doctorates, creative education? Aligning universities with the creative economy. *Nebula*, 4(2), 253-267. http://www.nobleworld.biz/images/L_and_B.pdf

Larivière, V. (2012). On the shoulders of students? The contribution of PhD students to the advancement of knowledge. *Scientometrics*, 90(2), 463-481. http://dx.doi.org/10.1007/s11192-011-0495-6 [also http://arxiv.org/abs/1108.5648]

Lee, A. (2010). When the article is the dissertation: Pedagogies for a PhD by publication. In C. Aitchison, B. Kamler & A. Lee (Eds.), *Publishing pedagogies for the doctorate and beyond*, pp.12-29. Oxon, UK: Routledge.

Lee, A. & Kamler, B. (2008). Bringing pedagogy to doctoral publishing. *Teaching in Higher Education*, 13(5), 511-523. http://dx.doi.org/10.1080/13562510802334723

Lietz, P. (Ed) (2015). *Australian Journal of Education* Video Interview - Dr Margaret Merga. https://vimeo.com/122481634

Maher, M. A., Timmerman, B. C., Feldon, D. F. & Strickland, D. (2013). Factors affecting the occurrence of faculty-doctoral student co-authorship. *The Journal of Higher Education*, 84(1), 121-143. http://dx.doi.org/10.1353/jhe.2013.0004

Moodie, J. & Hapgood, K. (2012). The PhD thesis by publication in engineering: Insights for supervisors. In *Profession of Engineering Education: Advancing Teaching, Research and Careers: 23rd Annual Conference of the Australasian Association for Engineering Education 2012* (p. 884). Engineers Australia. http://www.aaee.com.au/conferences/2012/documents/abstracts/aaee2012-submission-124.pdf

Mullins, G., & Kiley, M. (2002). 'It's a PhD, not a Nobel Prize': How experienced examiners assess research theses. *Studies in Higher Education*, 27(4), 369-386. http://dx.doi.org/10.1080/0307507022000011507

Organisation for Economic Co-operation and Development (OECD) (2011). *Education at a glance*. Washington DC: OECD. http://www.oecd.org/education/school/educationataglance2011oecdindicators.htm

Pare, A. (2010). Slow the presses: Concerns about premature publication. In C. Aitchison, B. Kamler & A. Lee (Eds.), *Publishing pedagogies for the doctorate and beyond*, pp.30-46. Oxon, UK: Routledge.

Prensky, M. (2001). Digital natives, digital immigrants, Part 1. *On the Horizon,* 9(5), 2-6. http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf

Presthus, W. & Bygstad, B. (2014). Strawberry analysis: Writing a paper-based PhD. In *Norsk konferanse for organisasjoners bruk av IT*, Vol. 22, No. 1. http://ojs.bibsys.no/index.php/Nokobit/article/view/46/44

Robins, L. & Kanowski, P. (2008). PhD by publication: A student's perspective. *Journal of Research Practice,* 4(2). http://jrp.icaap.org/index.php/jrp/article/view/136

Saracho, O. N. (2013). Writing research articles for publication in early childhood education. *Early Childhood Education Journal*, 41(1), 45-54. http://dx.doi.org/10.1007/s10643-012-0564-3

Sharmini, S., Spronken-Smith, R., Golding, C. & Harland, T. (2015). Assessing the doctoral thesis when it includes published work. *Assessment & Evaluation in Higher Education*, 40(1), 89-102. http://dx.doi.org/10.1080/02602938.2014.888535

Sinclair, J., Barnacle, R. & Cuthbert, D. (2014). How the doctorate contributes to the formation of active researchers: What the research tells us. *Studies in Higher Education*, 39(10), 1972-1986. http://dx.doi.org/10.1080/03075079.2013.806460

Starrs, D. B. (2008). Publish and graduate? Earning a PhD by published papers in Australia. *M/C: A Journal of Media and Culture,* 11(4). http://journal.media-culture.org.au/index.php/mcjournal/article/viewArticle/37

Welfare, L. E. & Sackett, C. R. (2011). The authorship determination process in student-faculty collaborative research. *Journal of Counseling & Development*, 89(4), 479-487. http://dx.doi.org/10.1002/j.1556-6676.2011.tb02845.x

Wellington, J. (2010). Weaving the threads of doctoral research journeys. In P. Thomson & M. Walker (Eds.), *The Routledge doctoral student's companion*, pp. 128-142. Abingdon, Oxon: Routledge.

Wynne, E. (2014). The key to encouraging teen reading is finding the right story. *ABC News Perth*, 13 October. http://www.abc.net.au/news/2014-1013/encouraging-teen-reading-with-the-right-story/5805122

Yates, L. (2010). Quality agendas and doctoral work. The tacit, the new agendas, the changing contexts. In P. Thomson & M. Walker (Eds.), *The Routledge doctoral student's companion* (pp. 299-310). Abingdon, Oxon: Routledge.

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